

IN THE CLAIMS:

Please cancel Claim 2 without prejudice or disclaimer of subject matter, add new Claims 10 and 11 and please amend Claims 1, 3, 4 and 6 to 9 as follows. The claims, as pending in the subject application, read as follows:

1. (Currently Amended) An image processing apparatus, comprising:

input means for inputting multivalued image information;

conversion means for ~~performing multivalued processing on the input multivalued image information and~~ converting the input multivalued information into first data representing a number of print dots for each pixel;

counting generation means for ~~counting~~ generating second data representing the total number of print dots ~~for in~~ each region made up of a plurality of pixels, based on the first data;

a memory for storing the second data generated by said generation means;

and

print dot layout determination means for inputting from said memory a plurality of the second data comprising the second data of a region of interest and the second data of at least one region around the region of interest, and determining a print dot layout in a the region of interest in accordance with ~~a count value of print dots in a peripheral region around the region of interest~~ the plurality of the second data.

2. (Canceled)

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3. (Currently Amended) The apparatus according to Claim 1; An image processing apparatus, comprising:

input means for inputting multivalued image information of an image;

conversion means for converting the input multivalued image information into first data representing a number of print dots for each pixel;

Q. generation means for generating second data representing the total number of print dots in each region, which is made up of a plurality of pixels, based on the first data;

a memory for storing the second data generated by said generation means;
and

print dot layout determination means for inputting from said memory a plurality of the second data comprising the second data of a region of interest and the second data of at least one region around the region of interest, and determining a print dot layout in the region of interest in accordance with the plurality of the second data,

wherein, when ~~an~~ the image is to be rotated, said counting generation means counts generates the second data for print dots for each of different regions in accordance with a rotational angle.

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4. (Currently Amended) The apparatus according to Claim 3, wherein said counting generation means comprises:

first counting generation means for ~~counting image data~~ generating the second data in binary form in a region made up of a predetermined number of successive pixels ~~successive~~ in a main scanning direction; and

second counting generation means for ~~counting image data~~ generating the second data in binary form in a region made up of a predetermined number of successive pixels ~~successive~~ in a subscanning direction,

and said counting generation means outputs:

when an image is not rotated, ~~binary count values counted~~ the second data generated by said first counting generation means, directly,

when an image is rotated through 180° , ~~binary count values counted~~ the second data generated by said first counting generation means, in an inverse order,

when an image is rotated through 90° , ~~binary count values counted~~ the second data generated by said second counting generation means, directly, and

when an image is rotated through 270° , ~~binary count values counted~~ the second data generated by said second counting generation means, in an inverse order.

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p. (Original) The apparatus according to Claim 1, further comprising image printing means for printing an image on a printing medium in accordance with the print dot layout output from said print dot layout determination means.

p. 7
p. (Currently Amended) An image processing method, comprising the steps of:

an input step of inputting multivalued image information;

a conversion step of ~~performing multivalued processing on the input multivalued image information and~~ converting the input multivalued image information into first data representing the number of print dots for each pixel;

a counting generation step of counting generating second data representing the total number of print dots for in each region made up of a plurality of pixels, based on the first data;

a memorizing step of storing the second data generated by said generation means in a memory; and

Q1 a print dot layout determination step of inputting from said memory a plurality of the second data comprising the second data of a region of interest and the second data of a least one region around the region of interest, and determining a print dot layout in a the region of interest in accordance with the plurality of the second data a count value of print dots in a peripheral region around the region of interest.

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/ 7. (Currently Amended) ~~The method according to Claim 6, An image processing method, comprising the steps of:~~

inputting multivalued image information of an image;

converting the input multivalued image information into first data representing a number of print dots for each pixel;

generating second data representing the total number of print dots in each region, which is made up of a plurality of pixels, based on the first data;

storing the second data generated by said generating step in a memory; and

a print dot layout determination step of inputting from the memory a plurality of the second data comprising the second data of a region of interest and the second data of at least one region around the region of interest, and determining a print dot layout in the region of interest in accordance with the plurality of the second data,

wherein ~~the counting step comprises a step of~~, when an the image is to be rotated, counting the generating step generates the second data for print dots for each of different regions in accordance with a rotational angle.

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p. (Currently Amended) The method according to Claim 7, wherein the counting generation step comprises:

a first counting generation step of counting image data generating the second data in binary form in a region made up of a predetermined number of successive pixels successive in a main scanning direction; and

Q₁
a second counting generation step of counting image data generating the second data in binary form in a region made up of a predetermined number of successive pixels successive in a subscanning direction,

and in said counting generating step outputs,

when an image is not rotated, ~~binary count values counted~~ the second data generated in the first counting generation step, ~~are directly output as binary values~~,

when an image is rotated through 180°, ~~binary count values counted~~ the second data generated in the first counting generation step, ~~are output~~ in an inverse order,

when an image is rotated through 90°, ~~binary count values counted~~ the second data generated in the second counting generation step, ~~are directly output as binary values~~, and

when an image is rotated through 270°, ~~binary count values counted~~ the second data generated in the second counting generation step, ~~are output~~ in an inverse order.

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9. (Currently Amended) A computer-readable storage medium which stores a program for an image processing method, the having program codes comprising the steps of:

an input step of inputting multivalued image information;

a conversion step of ~~performing multivalued processing on the input multivalued image information and~~ converting the input multivalued image information into first data representing the number of print dots for each pixel;

a counting generation step of counting generating second data representing the total number of print dots for in each region made up of a plurality of pixels, based on the first data;

Q. a memorizing step of storing the second data generated by said generating step in a memory; and

a print dot layout determination step of inputting from the memory a plurality of the second data, comprising the second data of a region of interest and the second data of at least one region around the region of interest, and determining a print dot layout in a the region of interest in accordance with a count value of print dots in a peripheral region around the region of interest the plurality of the second data.

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10. (New) The apparatus according to Claim 1, wherein the print dot layout in the region of interest is determined in accordance with a difference between the total number of print dots in one side region of the region of interest and the total number of print dots in another side region of the region of interest.

11. (New) The apparatus according to Claim 1, wherein dots of the print

dot layout in the region of interest are distributed in a main scanning direction, when the difference is small and the total number of print dots in the region of interest is small.
